City of San José
Department of Transportation
Transportation Planning

4 North Second Street, Ste. 1000
San José, Ca, 95113
408-277-4304

Bicycle and Pedestrian Program

Collision Analysis
2003 Annual Report

John Brazil
Bicycle & Pedestrian Program Coordinator
City of San José
(408) 277-3771
John.Brazil@sanjoseca.gov

Dennis Yi
Bicycle & Pedestrian Program Intern
City of San José
(408) 277-4304
Dennis.Yi@sanjoseca.gov

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

BICYCLE COLLISION DATA

PEDESTRIAN COLLISION DATA

City of San José, Bicycle and Pedestrian Program
Collision Analysis
2003 Annual Report

Background and Introduction

To evaluate Traffic Collisions, the City of San José's Department of Transportation (DOT) obtains copies of Traffic Collision Reports (TCR) occurring in San Jose, that are prepared by the San Jose Police Department (SJPD) at the time of the collision. DOT then collects basic collision data using proprietary software called Traffic Accident Prevention System (TAPS). DOT staff enters approximately 14,000 TCRs into TAPS each year.

The City of San José Bicycle Pedestrian Program provides additional analysis of all TCRs involving bicyclists or pedestrians. This analysis is summarized and submitted by DOT staff for review by the City of San José Bicycle Pedestrian Advisory Committee (BPAC).

Collisions are classified based on a system of assigning the party more at fault with one of a few crash types. The 2003 California Vehicle Code was referenced in regards to assigning fault in each collision.

Attached is the report for bicycle or pedestrian collisions that occurred for the year of 2003.

I. BICYCLE COLLISION DATA

In the year of 2003, there were:

- **317** bicycle collisions[1]
- **49** Hit and Run collisions (38 drivers and 11 bicyclists fled scene)[2]

Temporal Distribution

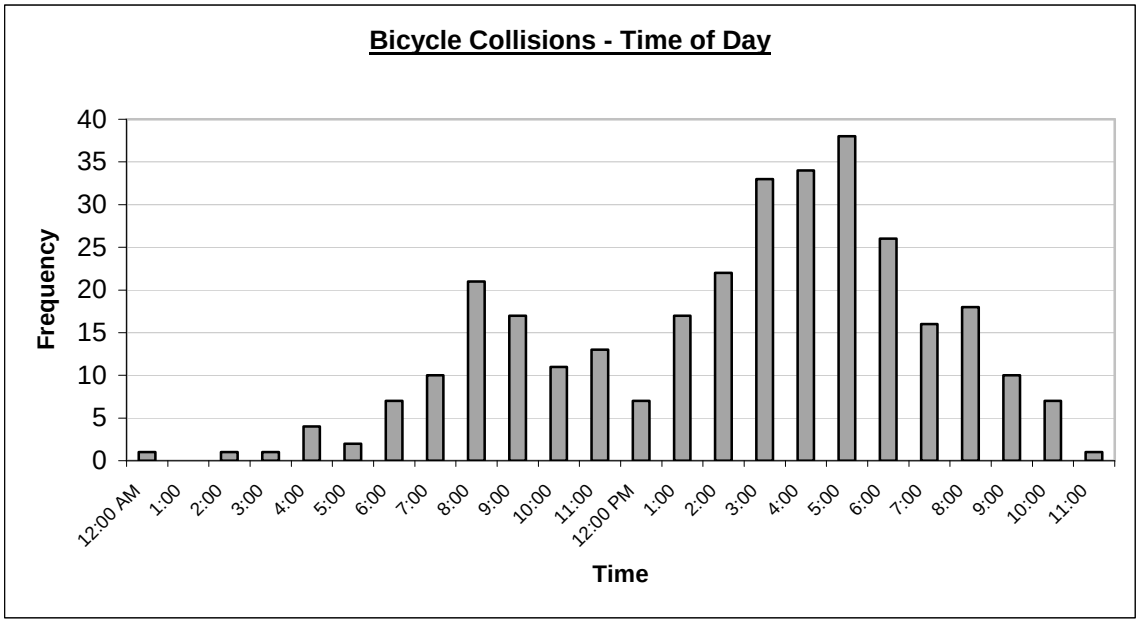

Figure 1.1[3]

[1] Data as of 2/25/04. Note that crash data may change slightly as a result of late reports and changing medical conditions.

[2] Legally, fleeing the scene does not necessarily render a party most at fault.

[3] Some TCRs may not contain complete data in each field. Therefore, query totals may not match up to collision totals.

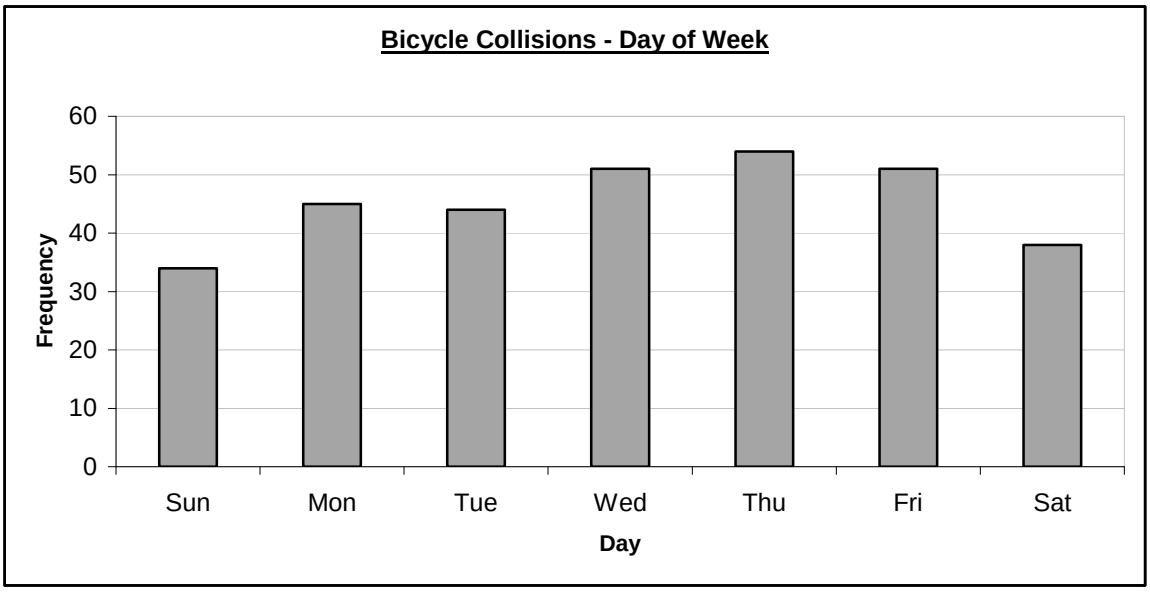

Figure 1.2

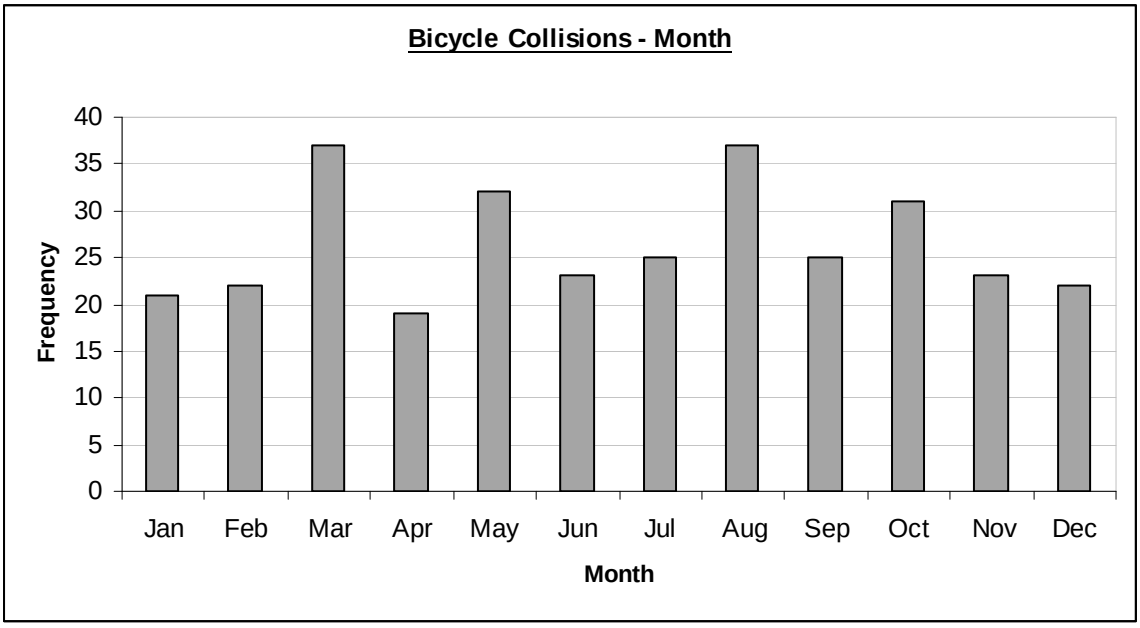

Figure 1.3

Crash Type Distribution

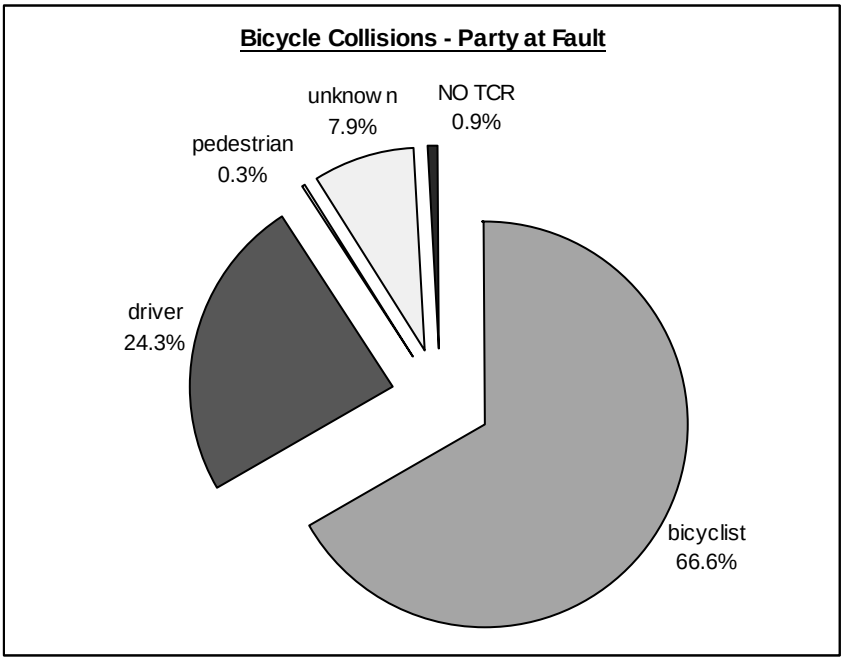

Figure 1.4 (see table 1.1)

Bicycle Collisions - Party at Fault

Cause Assignment	Frequency	CLASS
Primary	211	Bicycle
	77	Driver
	1	Pedestrian
Unknown	25	
NO TCR	3	

Table 1.1

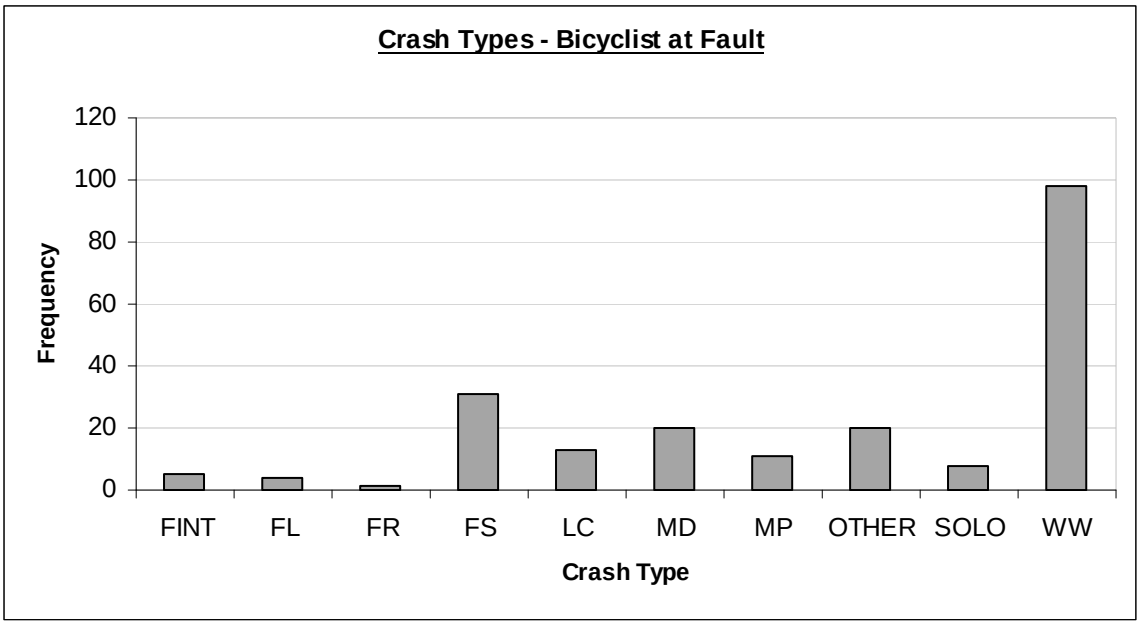

Figure 1.5

Crash Type Descriptions

WW *Wrong Way* : Bicyclist riding on wrong side of roadway.

MP *Mid-Block Pull-Out* : Bicyclist riding from driveway onto roadway.

MD *Mid-Block Dash* : Bicyclist attempts to cross roadway when unsafe to do so at a mid-block location.

FS *Failure to Yield, Stop Sign/Signal* : Bicyclist does not stop at stop sign or yield to signal.

LC *Lane Change* : Bicyclist changes lane in an unsafe manner.

SOLO *Solo* : Accident involving a bicyclist only.

FR *Failure to Yield, Right Turn* : Bicyclist making a right turn does not yield to oncoming traffic.

FL *Failure to Yield, Left Turn* : Bicyclist making a left turn does not yield to oncoming traffic.

FINT *Failure to Yield in Intersection* : Bicyclist does not yield to a driver in the intersection, not defined by FR or FL.

OTHER *Other* : Crash type not defined by any of the types above (eg. Intoxicated bicyclist, faulty bike components, towed by vehicle).

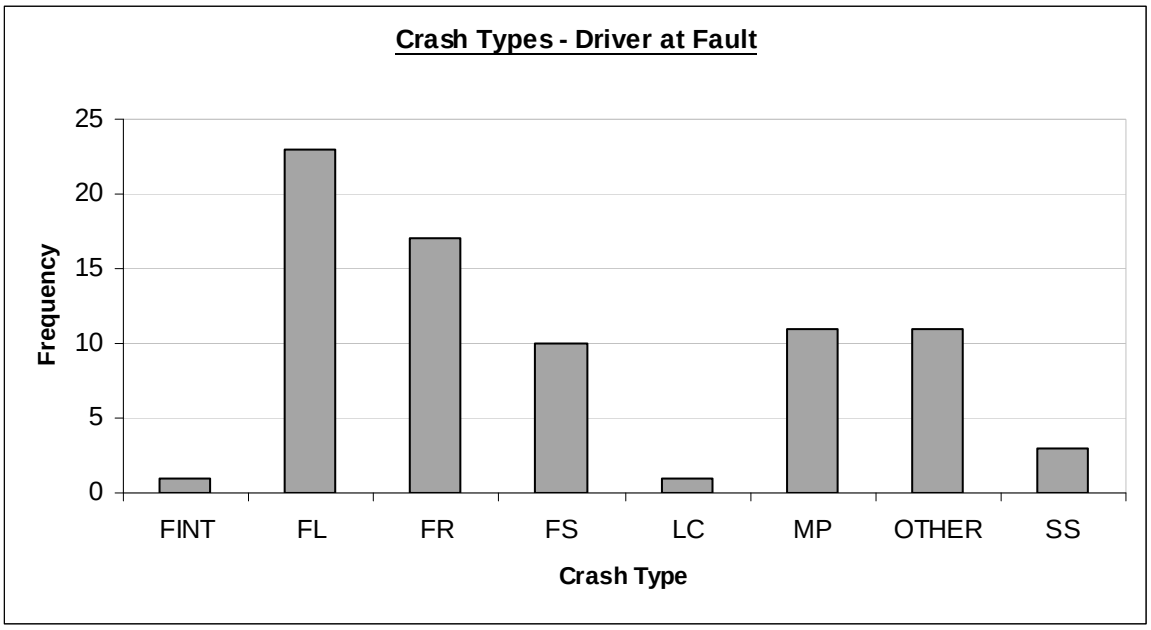

Figure 1.6

Crash Type Descriptions

MP *Mid-Block Pull-In/Out* : Driver pulls into or out of driveway.

FS *Failure to Yield, Stop Sign/Signal* : Driver does not stop at stop sign or yield to signal.

FL *Failure to Yield, Left Turn* : Driver making a left turn does not yield to bicyclist.

FR *Failure to Yield, Right Turn* : Driver making a right turn does not yield to bicyclist.

FINT *Failure to Yield in Intersection* : Driver does not yield to a driver in the intersection, not defined by FR or FL.

LC *Lane Change* : Driver changes lane in an unsafe manner.

SS *Sideswipe*: Driver drives too close to bicyclist and contact ensues.

OTHER *Other* : Crash type not defined by any of the types above (eg. Speeding, opened car door, rear end bicycle).

Age Distribution

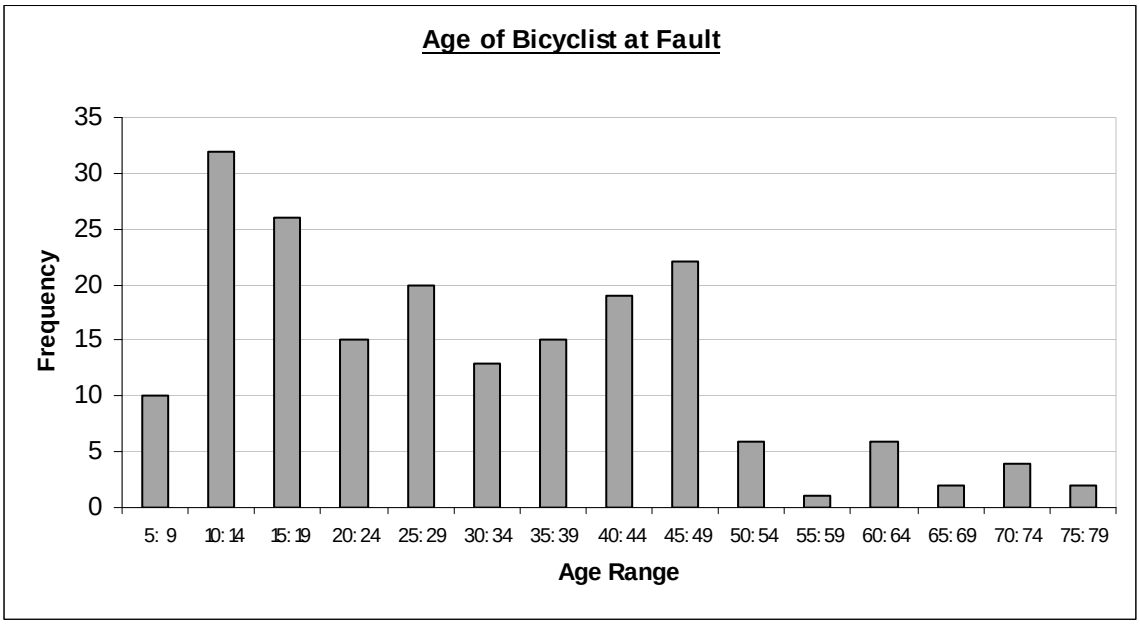

Figure 1.7

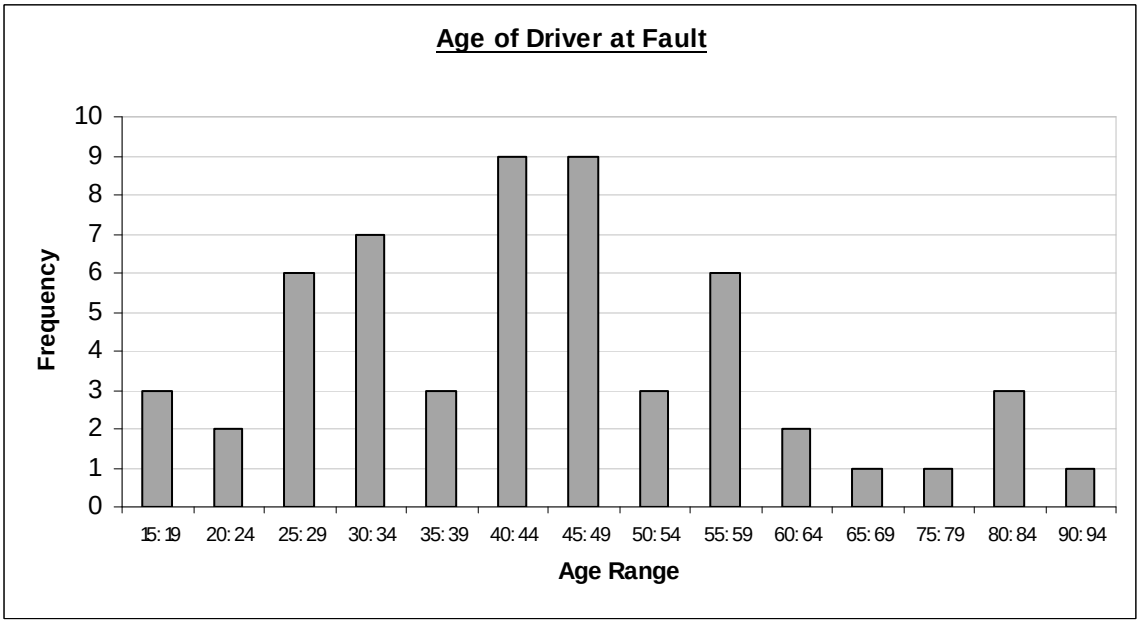

Figure 1.8

Bicyclist Wrong Way Riding In Detail

California Vehicle Code - Bicycle Operated on Roadway or Highway Shoulder
21650.1. A bicycle operated on a roadway, or the shoulder of a highway, shall be operated in the same direction as vehicles are required to be driven upon the roadway.

The bicyclist riding on the wrong side of the road accounts for nearly half of the entire bicyclist at fault collisions. In most of these collisions, the driver is also to be considered partially at fault for the collision. A typical scenario describing this crash type would be as follows: A driver making a right turn at a street or driveway location looks to the left for oncoming traffic, proceeds forward and either broadsides or is broadsided by a bicyclist riding on the wrong side of the roadway.

The figure below details the bicyclist's primary collision factor of wrong way riding and the driver's associated collision factor.

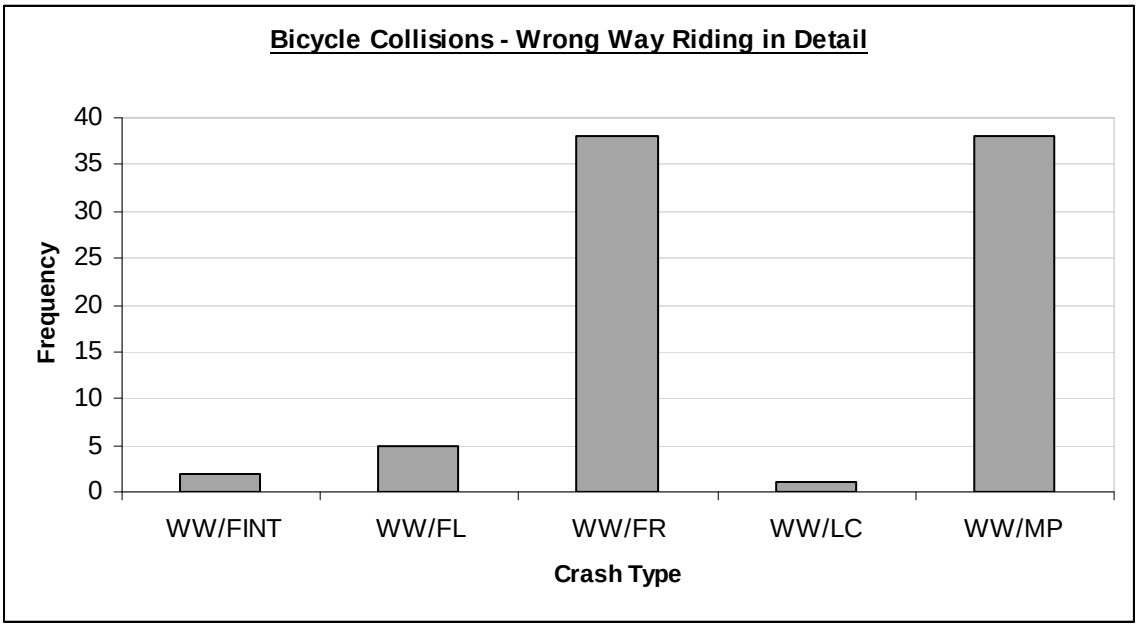

Figure 1.9

Lighting Conditions vs. Injury

LIGHT	INJURY SEVERITY				
	Major	Moderate	Minor	None	Total
Dark No Light	-	-	1	-	1
Dark w/ Light	6	25	24	10	65
Day	8	67	111	50	236
Dusk/Dawn	-	5	6	4	15
Grand Total	14	97	142	64	317

Table 1.2

Location vs. Injury

LOCATION	INJURY SEVERITY				
	Major	Moderate	Minor	None	Total
Driveway	1	20	33	19	73
Intersection	6	40	67	25	138
Midblock	3	24	26	11	64
Intersection-Related	4	13	16	9	42
Grand Total	14	97	142	64	317

Table 1.3

Weather vs. Injury

WEATHER	INJURY SEVERITY				
	Major	Moderate	Minor	None	Total
Clear	14	90	111	57	272
Cloudy	-	7	23	5	35
Rain	-	-	8	2	10
Grand Total	14	97	142	64	317

Table 1.4

Road Surface vs. Injury

ROAD SURFACE	INJURY SEVERITY				
	Major	Moderate	Minor	None	Total
Dry	14	96	129	61	300
Wet	-	1	13	3	17
Grand Total	14	97	142	64	317

Table 1.5

II. PEDESTRIAN COLLISION DATA

In the year of 2003, there were:

- **329** pedestrian collisions (9 Fatal)[4]
- **68** Hit and Run Collisions (67 Drivers and 1 Bicyclist fled scene)

Temporal Distribution

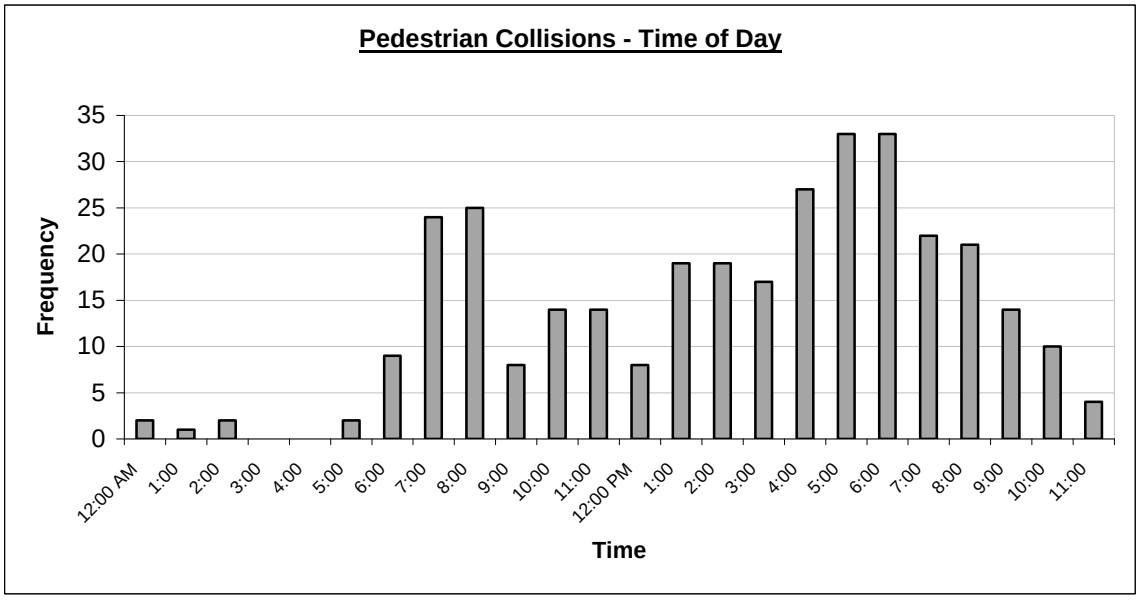

Figure 2.1

[4] Data as of 2/25/2004.

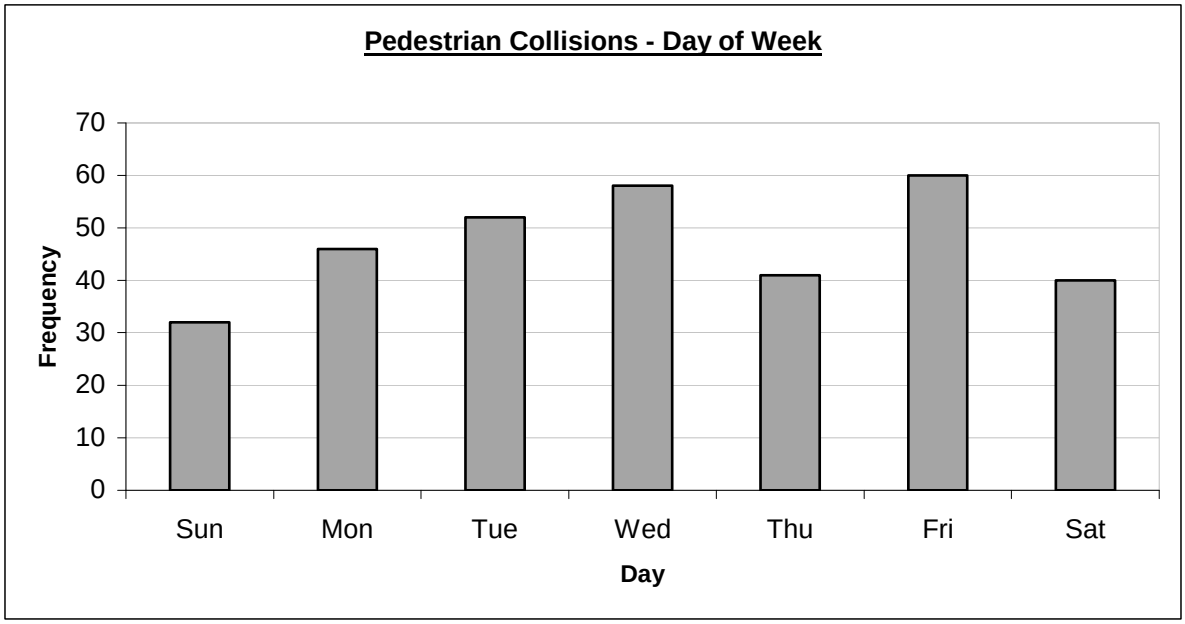

Figure 2.2

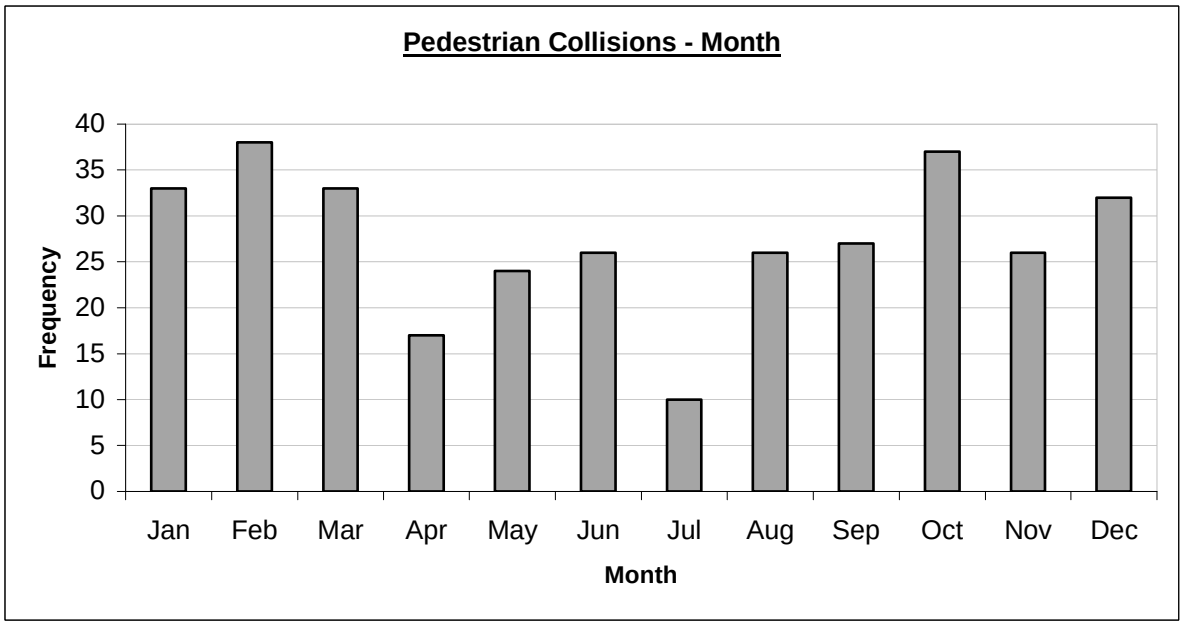

Figure 2.3

Crash Type Distribution

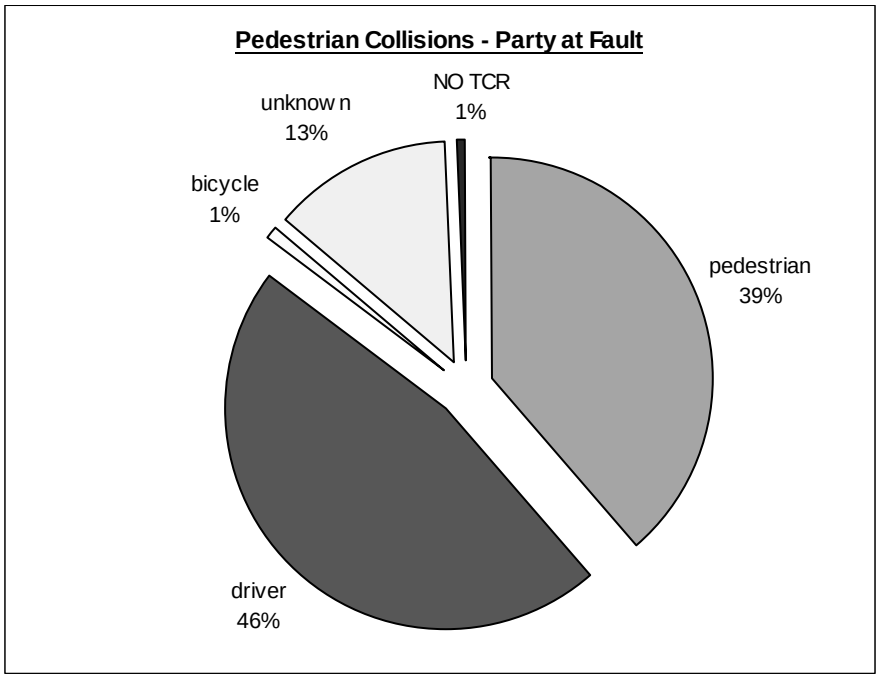

Figure 2.4 (see table 2.1)

Pedestrian Collisions - Party at Fault

Cause Assignment	Frequency	CLASS
Primary	127	Pedestrian
	154	Driver
	2	Bicycle
Unknown	44	
NO TCR	2	

Table 2.1

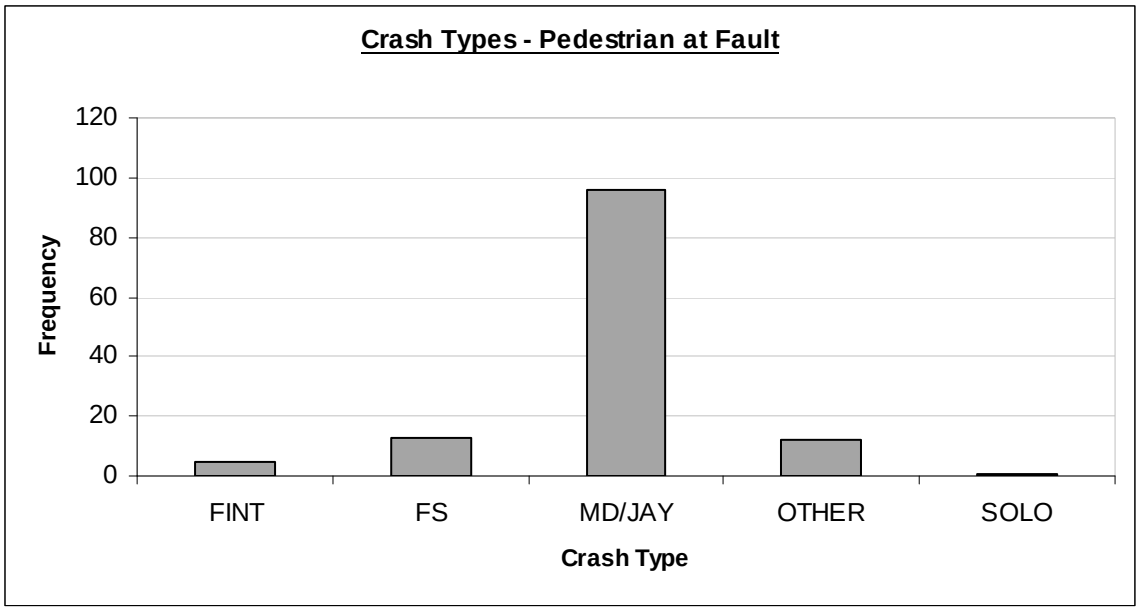

Figure 2.5

Crash Type Descriptions

MD/JAY *Mid-Block Dash/Jaywalking* : Pedestrian crosses a roadway at a mid-block location.

FS *Failure to Yield, Stop Sign/Signal* : Pedestrian does not stop at stop sign or yield to signal.

FINT *Failure to Yield in Intersection* : Pedestrian does not yield to a driver in the intersection.

OTHER *Other* : Crash type not defined by any of the types above.

SOLO *Solo* : Accident involving a pedestrian only.

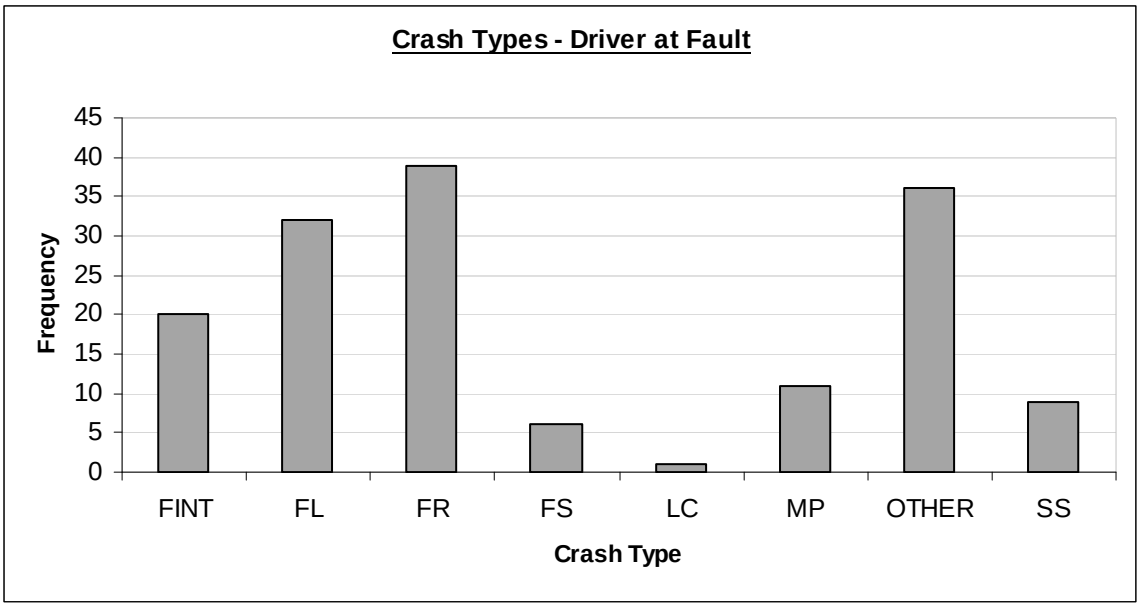

Figure 2.6

Crash Type Descriptions

MP *Mid-Block Pull-In/Out* : Driver pulls into or out of driveway.

FS *Failure to Yield, Stop Sign/Signal* : Driver does not stop at stop sign or yield to signal.

FL *Failure to Yield, Left Turn* : Driver making a left turn does not yield to pedestrian.

FR *Failure to Yield, Right Turn* : Driver making a right turn does not yield to pedestrian.

FINT *Failure to Yield in Intersection* : Driver does not yield to a pedestrian in the intersection.

SS *Sideswipe*: Driver drives too close to pedestrian and contact ensues.

OTHER *Other* : Crash type not defined by any of the types above.

Age Distribution

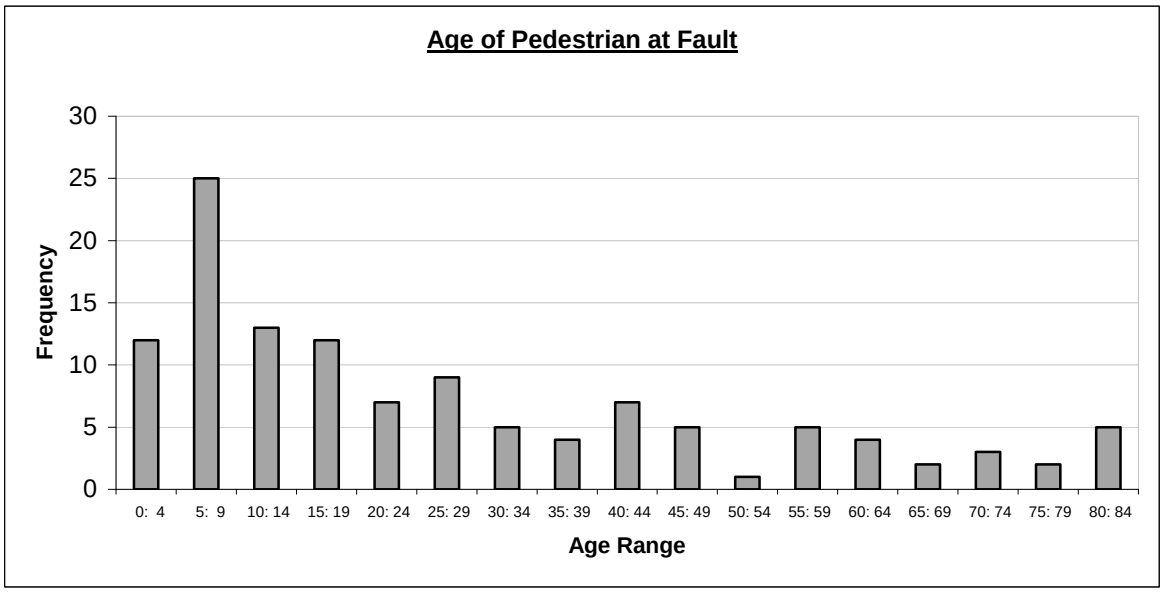

Figure 2.7

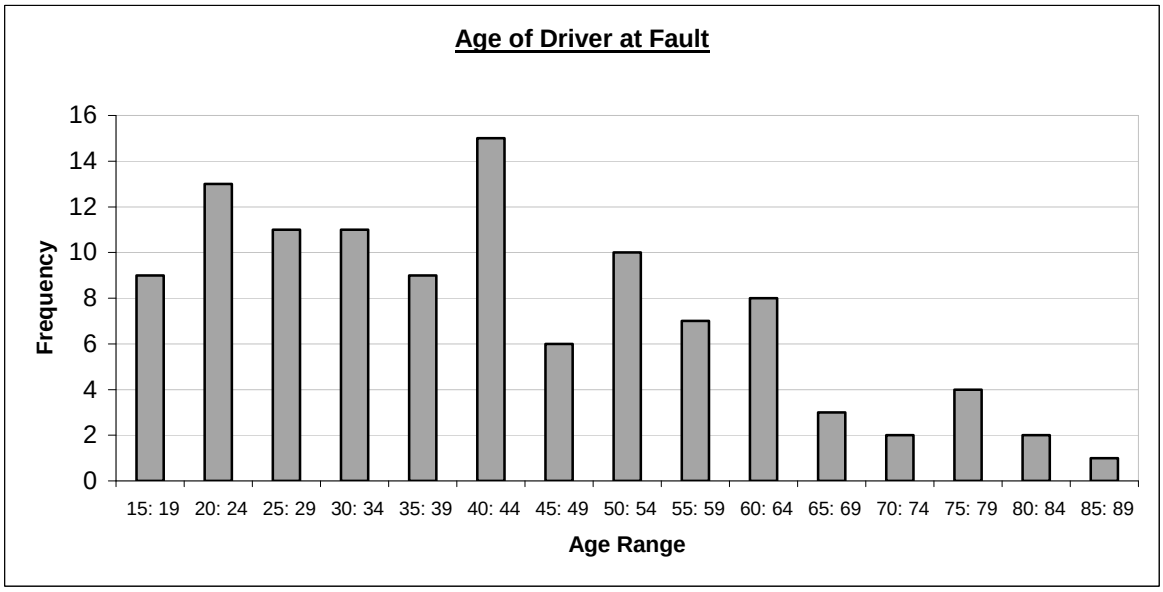

Figure 2.8

Pedestrian Midblock Dash / Jaywalk in Detail

California Vehicle Code - Pedestrians Outside Crosswalks
21954. (a) Every pedestrian upon a roadway at any point other than within a marked crosswalk or within an unmarked crosswalk at an intersection shall yield the right-of-way to all vehicles upon the roadway so near as to constitute an immediate hazard.

The most prevalent crash type involved in a pedestrian collision is that of the midblock dash / jaywalk and accounts for nearly 75% of all pedestrian at fault collisions. This scenario is defined by a pedestrian who crosses the street at a non-intersection location and is hit by an oncoming vehicle.

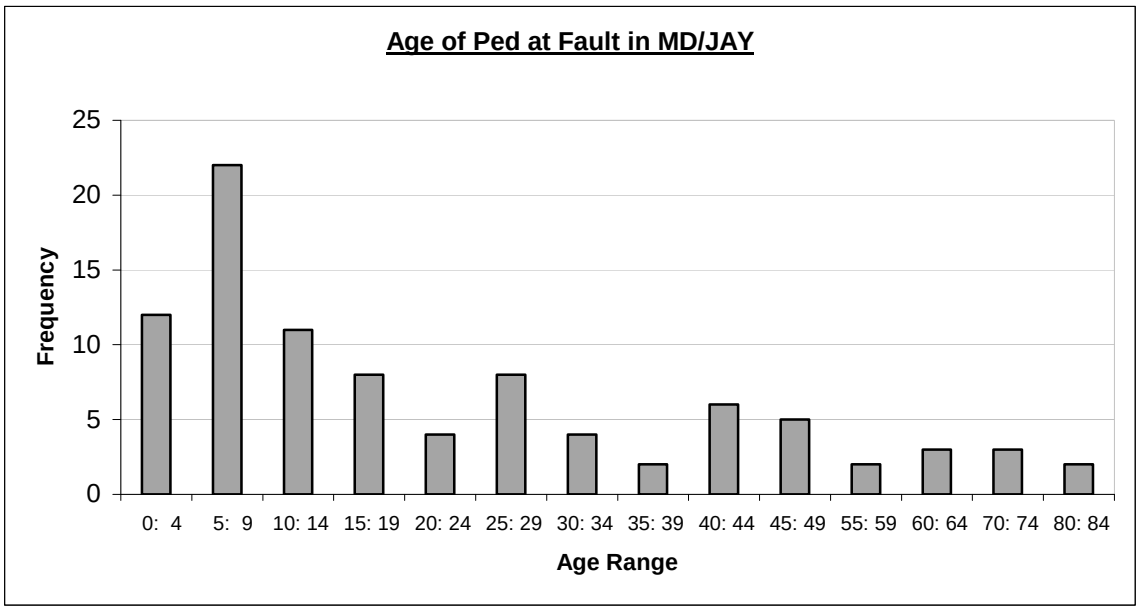

Figure 2.9

Pedestrian Fatality Analysis

In the year of 2003, there were 9 pedestrian fatalities (3 hit and run).

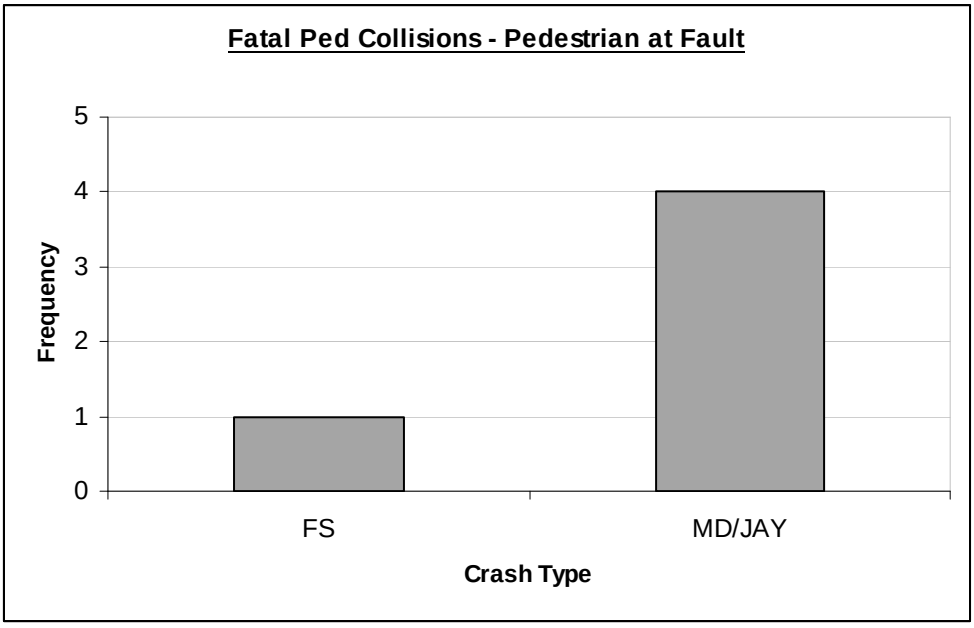

Figure 2.10

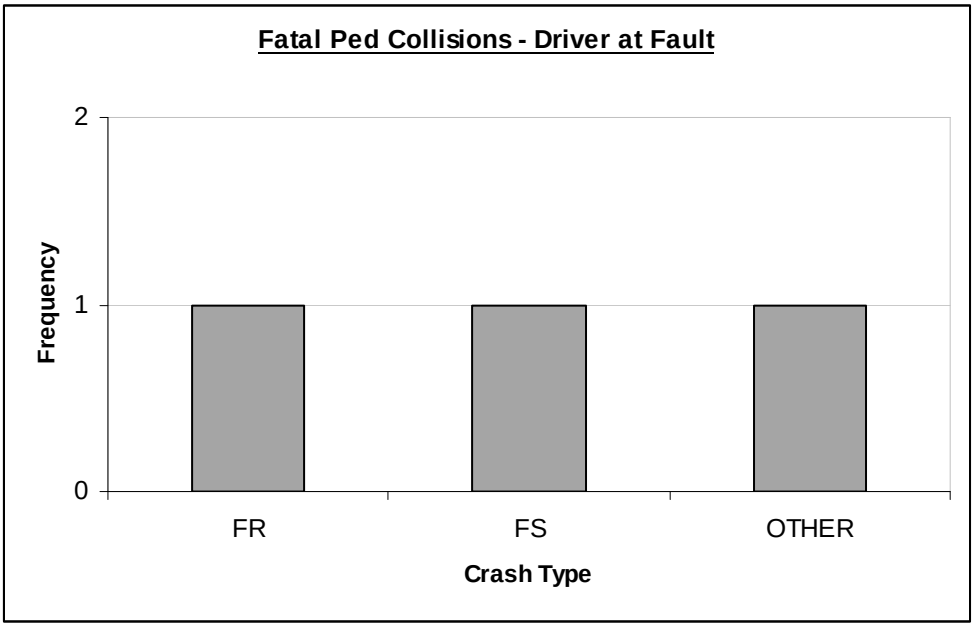

Figure 2.11

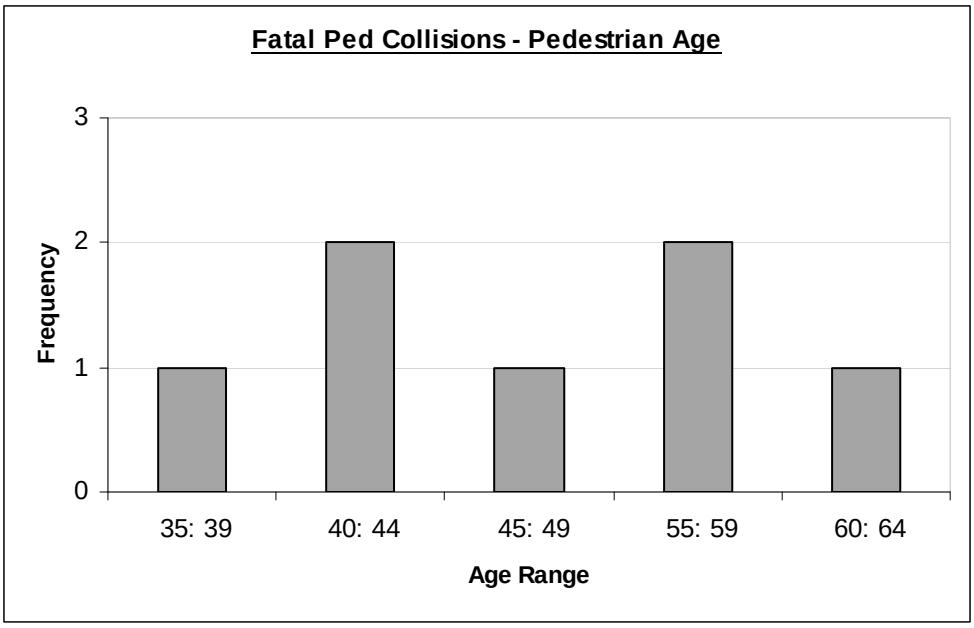
Fatal Ped Collisions - Pedestrian Age
Frequency
3
2
1
0
35: 39
40: 44
45: 49
55: 59
60: 64
Age Range

Figure 2.12

Lighting Conditions vs. Injury

LIGHT	INJURY SEVERITY					
	Fatal	Major	Moderate	Minor	None	Total
Dark No Light	-	1	2	-	-	3
Dark w/ Light	7	13	31	44	5	100
Day	1	22	77	94	19	213
Dusk/Dawn	1	-	9	3	-	13
Grand Total	9	36	119	141	24	329

Table 2.2

Location vs. Injury

LOCATION	INJURY SEVERITY					
	Fatal	Major	Moderate	Minor	None	Total
Driveway	-	3	11	17	4	35
Intersection	2	9	47	68	9	135
Midblock	6	19	54	49	9	137
Intersection-Related	1	5	7	7	2	22
Grand Total	9	36	119	141	24	329

Table 2.3

Weather vs. Injury

WEATHER	INJURY SEVERITY					
	Fatal	Major	Moderate	Minor	None	Total
Clear	8	31	100	120	21	280
Cloudy	1	3	14	14	2	34
Rain	-	2	5	7	1	15
Grand Total	9	36	119	141	24	329

Table 2.4

Road Surface vs. Injury

ROAD SURFACE	INJURY SEVERITY					
	Fatal	Major	Moderate	Minor	None	Total
Dry	9	33	112	134	23	311
Wet	-	3	7	7	1	18
Grand Total	9	36	119	141	24	329

Table 2.5